

Environmental Chamber Programming (Watlow Controller)

Ground rules – Assumes controller has already been set up in the setup menu as to thermocouple type, outputs, etc. Generally safe to assume.

This program cycles temperature from 40 C to 0 C to 40 C continuously. Ramp up to 40 is done in 1 minute, hold time at 40 is 3 hours, ramp from 40 to 0 is done in 1 minute, hold time at 0 is 1 hour and ramp from 0 to 40 is done in 1 minute.

Step 1 – Press mode button.

Step 2 – Controller requests answer to PrOg (program) question. Use arrow to select yes.

Step 3 – Press mode button.

Step 4 – Controller displays step 1 – press arrows to select StPt (setpoint) option.

Step 5 – Press mode button

Step 6 – Controller asks for temperature StPt – use arrows to set temp. of 40 C.

Step 7 – Press mode button

Step 8 – Controller wants hours for ramp to 40 C (default is 0)

Step 9 – Press mode button to accept 0 hours

Step 10 – Controller wants minutes for ramp to 40 C. Use arrow to select 1 minute.

Step 11 – Press mode button.

Step 12 – Controller wants seconds for ramp to 40 C. (default is 0)

Step 13 – Press mode button to accept 0 seconds.

Step 14 – Controller asks if rtn (return) accept default no by pressing mode button.

Step 15 – Controller displays step 2. Press arrows to select SoAh (soak).

Step 16 – Press mode button.

Step 17 – Controller now wants hours, minutes and seconds as above. Proceed as was done in steps 8 – 14 setting a soak time of 3 hours by using the arrows at the appropriate point in the menu.

Step 18 – Step 3 is displayed. Use arrows to select StPt option as in step 4.

Step 19 – Repeat steps 5 – 14 as above but select 0 C as temperature in step 6.

Step 20 – Step 4 is displayed. Use arrows to select SoAh (soak).

Step 21 – Repeat steps 8 – 13 using a soak time of 1 hour.

Step 22 – Controller asks if rtn (return). Use arrows to select yes.

Step 23 – Controller returns to normal mode. Pushing the Hold / Run button once or twice will start the program running. The LED in the button will illuminate continuously when the program is running. Pressing the butto¹n again will stop the program.

¹ *Data compiled and analyzed by Richard Conte 3/10/04*